

AMENDMENTS TO THE DRAWINGS

The attached drawings include changes to Figures 2, 3, 7A and 7B. These sheets, which include Figures 2-4, 7A and 7B, replace the original sheets including Figures 2-4, 7A and 7B. Various reference numerals in Figures 2, 3, 7A and 7B have been amended for consistency with the specification, in response to the Examiner's comments. No new matter is added.

Attachments: Annotated sheets showing changes (4)

Replacement Sheets (4)

REMARKS/ARGUMENTS

Claims 1-34 are pending in this application. By this Amendment the drawings, specification, and claims 1 and 4 are amended. Support for the claims can be found throughout the specification, including the original claims and the drawings. Withdrawal of the rejections in view of the above amendments and the following remarks is respectfully requested.

I. Drawings and Specification

The Office Action objects to the drawings and specification due to various informalities. It is respectfully submitted that the amendments to the drawings and specification submitted herewith are responsive to the Examiner's comments, and thus the objections to the drawings and specification should be withdrawn.

II. Rejections Under 35 U.S.C. §102(b)

The Office Action rejects claims 1-3, 5-8, 10, 11 and 29-32 under 35 U.S.C. §102(b) over Korean Patent No. 1994-0006388 to Yoo. The rejection is respectfully traversed.

Independent claim 1 is directed to a filter for a washing machine. The filter includes a shaft extending from a bottom of the cap, and a funnel shaped extension extending from an end of the shaft, the extension disposed to confront the opening so as to filter particles included in the water, the extension having a protrusion protruding from a side of the extension opposite to the cap wherein the protrusion extends away from the cap and has a diameter that is smaller than a largest diameter portion of the extension.

Independent claim 6 is directed to a filter for a washing machine, including a shaft extending from a bottom of the cap, and a solid walled extension extending from an end of the shaft, the extension disposed to confront the opening to filter particles in water, the

extension having a protrusion protruding from a side of the extension opposite to the cap. Yoo neither discloses nor suggests at least such features, let alone the respective claimed combinations of features.

Yoo discloses in Figures 5-6 (referred to in the Office Action) a filter 11 for a drainage pump in a washing machine. The filter 11 is fitted into a case 26. The filter includes a cap 12, a first disc 17 fitted to the cap 12 by a first connecting bar 13 so as to form a back side of the cap 12, a second disc 19 connected to the first disc 17 by a second connecting bar 18, and a third disc 20 connected to the second disc 19 by a third connecting bar 21. Particle laden water enters the case 26 through an inlet 24. Water passes through gaps between the second disc 19 and the inner surface of the case 26, while particles in the water are forced through a center opening in the second disc 19. These particles are captured by the third disc 20, and only water flows out through an outlet 25.

It appears the Examiner has drawn a comparison between the cap 12, second connecting bar 18, second disc 19 and third disc 20 disclosed by Yoo, and the cap, shaft, extension, and protrusion, respectively, recited in independent claims 1 and 6. If such a comparison is to be made, then it is respectfully submitted that Yoo neither discloses nor suggests an extension as recited in independent claims 1 and 6. More specifically, the second disc 19 disclosed by Yoo (compared in the Office Action to the recited extension) is disc shaped, with a hole in the center, and clearly not funnel shaped, as is the extension recited in independent claim 1. Further, the second disc 19 has a hole in its center through which some of the particles travel through. Thus, Yoo neither discloses nor suggests that the second disc 19 is solid walled, as is the extension recited in independent claim 6. Further, the third disc 20 (compared in the Office Action to the recited protrusion) extends from the

third connecting bar 21, and not from the second disc 19. Thus, if these comparisons are to be drawn, then Yoo neither discloses nor suggests a protrusion extending from a side of the extension opposite the cap, as recited in independent claims 1 and 6.

It is noted that Yoo also discloses first and second prior art filter assemblies in Figures 1-4. In the filter assembly shown in Figures 1-2 of Yoo, a basket type mesh filter 8 is positioned in a case 10 opposite an inlet 6 so as to filter water passing through the case 10 and out through an outlet 7. This first prior art filter assembly does not include any type of shaft, extension or protrusion extending from its cap. In the filter assembly shown in Figures 3-4 of Yoo, a conical mesh filter 9 extends longitudinally in the case 10. Water entering through the inlet 6 impinges on the narrow part of the filter 9, capturing particles on its outside while allowing water to flow through the mesh filter 9 and out through the outlet 7. Yoo neither discloses nor suggests that the filter assembly shown in Figures 3-4 includes a protrusion as recited in independent claims 1 and 6, nor that the conical filter is solid walled, as recited in independent claim 6.

Additionally, it would not have been obvious to combine the features of either of these prior art filter assemblies, and particularly the conical mesh filter 9, with the filter assembly shown in Figures 5-6 of Yoo. Such modification to the filter assembly shown in Figures 5-6 would completely disrupt the flow of water and the capture of particles within the filter case 10, thus adding significant complexity and destroying the utility and functionality of Yoo's design as originally intended.

For at least these reasons, it is respectfully submitted that independent claims 1 and 6 are not anticipated by Yoo, and thus the rejection of independent claims 1 and 6 under 35 U.S.C. §102(b) over Yoo should be withdrawn. Dependent claims 2, 3, 5, 7, 8, 10, 11 and

29-32 are allowable at least for the reasons set forth above with respect to independent claims 1 and 6, from which they respectively depend, as well as for their added features.

The Office Action rejects claims 1, 4, 6, 9, 22 and 24-28 under 35 U.S.C. §102(b) over German Patent No. 39 22 629 to Beier et al. (hereinafter “Beier”). The rejection is respectfully traversed.

The features of independent claims 1 and 6 have been set forth above. Independent claim 22 recites similar features in varying scope. Beier neither discloses nor suggests at least such features, let alone the respective claimed combinations of features.

Beier discloses a filter assembly for a washing machine, including a casing 1 with an inlet 4 and an outlet 5. A filter element 6 is positioned in the casing 1, and includes a shaft 11 with a cap 20 at one end, and a labyrinth filter 10 (compared in the Office Action to the recited extension) at the opposite end. As would be well understood by one of ordinary skill in the art, a labyrinth filter includes a plurality of hollow interior passages which deliberately direct water through its walls so as to filter out particles before it exits the labyrinth filter 10. The labyrinth filter 10 takes the shape of a cap or bracket fitted across the end of the shaft 11. Beier neither discloses nor suggests that the labyrinth filter 10 is funnel shaped or conical shaped, as is the extension recited in independent claims 1 and 22, let alone that a diameter of the extension increases in a direction away from the cap, as recited in independent claim 22, nor that the labyrinth filter 10 is solid walled or a solid surface, as is the extension recited in independent claims 6 and 22. Further, the tip of the shaft 11 (compared in the Office Action to the recited protrusion) extends from the shaft 11, and not from the labyrinth filter 10, or extension, as do the protrusions recited in independent claims 1 and 6.

Accordingly, it is respectfully submitted that independent claims 1, 6 and 22 are not anticipated by Beier, and thus the rejection of independent claims 1, 6 and 22 under 35 U.S.C. §102(b) over Beier should be withdrawn. Dependent claims 4, 9 and 24-28 are allowable at least for the reasons set forth above with respect to independent claims 1, 6 and 22, from which they respectively depend, as well as for their added features.

III. Rejections Under 35 U.S.C. §103(a)

The Office Action rejects claims 14-16, 18-21 and 33 under 35 U.S.C. §103(a) over Yoo in view of U.S. Patent No. 6,167,733 to Lee. The rejection is respectfully traversed.

Under 35 U.S.C. §103(c), subject matter developed by another person which qualifies as prior art under 35 U.S.C. §102(e) shall not preclude patentability under 35 U.S.C. §103 where the subject matter of the claimed invention was, at the time the invention was made, subject to an obligation of assignment to the same person. In accordance with the assignment document (executed November 18, 2003), the Assignee for the present application (filed November 25, 2003) is LG Electronics Inc. of Seoul, Korea. The Assignee of record for Yoo is also LG Electronics of Seoul, Korea. A copy of the assignment document for the present application is provided for the Examiner's convenience. Accordingly, it is respectfully submitted that Yoo is not a proper reference, and thus cannot be properly applied in a rejection of the present application under 35 U.S.C. §103(a).

Further, Lee is merely cited as allegedly teaching a washing machine with a cabinet, a tub, a drum and a filter assembly. Thus, Lee alone neither discloses nor suggests each of the features recited in independent claim 14, and thus fails to overcome the deficiencies of Yoo with respect to this rejection. Accordingly, it is respectfully submitted that the rejection of independent claim 14 under 35 U.S.C. §103(a) over Yoo and Lee should be withdrawn.

Dependent claims 15, 16, 18-21 and 33 are allowable at least for the reasons set forth above with respect to independent claim 14, from which they depend, as well as for their added features.

The Office Action rejects claims 14, 17, 33 and 34 under 35 U.S.C. §103(a) over Beier in view of Lee. The rejection is respectfully traversed.

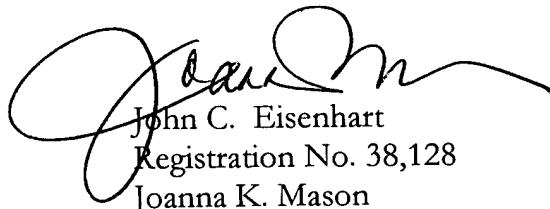
Independent claim 14 recites a filter, including a shaft extending from a bottom of the cap, and a solid walled extension extending from an end of the shaft, the extension disposed to confront the opening to filter particles in the water, the extension having a protrusion protruding from a side of the extension opposite to the cap. As set forth above, Beier neither discloses nor suggests at least such features, and Lee fails to overcome the deficiencies of Beier. Accordingly, it is respectfully submitted that independent claim 14 is allowable over the applied combination, and thus the rejection of independent claim 14 under 35 U.S.C. §103(a) over Beier and Lee should be withdrawn. Dependent claims 17, 33 and 34 are allowable at least for the reasons set forth above with respect to independent claim 14, from which they depend, as well as for their added features.

IV. Conclusion

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. If the Examiner believes that any additional changes would place the application in better condition, the Examiner is invited to contact the undersigned, **JOANNA K. MASON**, at the telephone number listed below.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
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ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

(1) Il Rog, HEO (6) _____
 (2) _____ (7) _____
 (3) _____ (8) _____
 (4) _____ (9) _____
 (5) _____ (10) _____

who have made a certain new and useful invention, hereby sell, assign and transfer unto

LG Electronics Inc.

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its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

FILTER ASSEMBLY FOR WASHING MACHINE

(a) for which an application for United States Letters Patent was filed on _____, and identified by United States Serial No. _____; or

(b) for which an application for United States Letters Patent was executed on _____

and the undersigned hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefor and any and all extensions, divisions, reissues, substitutes, renewals, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agree that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agree to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the dates indicated aside our signatures

INVENTORS

DATE SIGNED

1) Il Rog, HEO _____

Name: Il Rog, HEO

2) _____

Name:

3) _____

Name:

4) _____

Name:

5) _____

Name:

6) _____

Name: